



Rudolf E. Kaiser

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Dear Colleagues,

Congratulations to Rudolf Ernst Kaiser who celebrated his 90th birthday on February 12. He is a remarkable pioneer of chromatography, active in this field since 1953, and he founded our Journal of Planar Chromatography (JPC) in 1989.

Rudolf E. Kaiser was born in 1930 in Teplitz-Schönau (now Czechoslovak Federative Republic) and grew up there, but had to leave Northern Bohemia with his parents in 1945 as displaced persons. His fascinating career began at the age of 17 as a technical director in his late father's paint and varnish factory in Zittau, founded in 1946, until his mother was expropriated in 1950.

He studied chemistry at the Technical University of Dresden and the University of Leipzig and completed his academic training in 1954 (within one year) with the title Dr. rer. nat. The topic of his dissertation is “Zum Mechanismus und zur Kinetik der Paraffinoxydation”. In this work, he separated synthetic C₁₀ to C₂₁ fatty acids by reversed face thin-layer chromatography (TLC). Similar to today's micro-circular planar chromatography, he could separate and identify C₁₆ and C₁₇ from C₁₈ fatty acids by partially overlapping of sample and standard zones, because for two analytes, the chosen stationary and mobile phase were absolutely identical. After his dissertation, he was assigned to the separation technology department at the German Academy of Science at Leipzig. In 1959—at the age of 29—he published his first book with the

title “Gaschromatographie”, which was a great success worldwide (it was also translated into English).

In 1960, he involuntarily left the dogmatic environment of the German Democratic Republic (GDR) because he refused to spy on Western scientists during his many foreign business trips. After a warning, he, his wife and two children had less than one-hour time for the decision to move to West Berlin, and then further to the Bundesrepublik Deutschland (BRD) where he became an employee of BASF in Ludwigshafen for the next 12 years. Here, he introduced capillary gas chromatography into industrial practice and also developed capillary gas chromatography (GC) instruments for in-house series production. In the years 1960–1961 he published his book series “Chromatographie in der Gasphase”, which was highly regarded in the professional world and also had several editions in English. In Germany, the book was named the *Gas Chromatography Bible*. It was the first book on quantitative gas chromatography, and one volume of this series was the first book worldwide on capillary gas chromatography. In that time, he was one of the first scientists using chromatography for environmental analysis. From 1960 to 1965, he built up an exemplary environmental monitoring at BASF using capillary GC for environmental analysis.

In 1972, Rudolf E. Kaiser left BASF and founded his own institute for chromatography in Bad Dürkheim, a town near Ludwigshafen. This international research and training center for analytical science since then has been visited by over 7000 analysts from more than 50 countries. In addition, while sharing his knowledge with thousands of chromatographers, the institute has solved analytical problems and developed instruments for many, even the largest, companies.

Rudolf E. Kaiser is the author of more than 200 publications and more than 20 books. His main research area was GC and TLC as well as statistical evaluation of the analytical results. He recognized the power of computers in analytics very early and used this tool, including software writing.

Since his doctoral thesis in 1954, Rudolf E. Kaiser has always worked in the field of planar chromatography. He was the driving force behind what we now call high performance thin layer chromatography (HPTLC). In the late 1970s,

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he wrote “During the past few years, we somewhat modified the techniques of classical thin-layer chromatography and, together with D. Jaenchen of CAMAG (MuttENZ, Switzerland) we succeeded in revitalizing the instrumentation of this technique. It was J. Blome’s (Au/Iller) idea to use circular development from the center (as had been originally done in thin-layer chromatography); Ute B. Hezel (K. Zeiss, Oberkochen) and J. Rippahn (E. Merck, Darmstadt) developed the method to evaluate such plates quantitatively while H. Halpaap (E. Merck, Darmstadt) can be credited with the new high-efficiency readymade plate materials. As a result of this collective work, we could now enter a new field: anti-circular multi-component parallel analysis, 48 samples in 4 minutes” (JOURNAL OF CHROMATOGRAPHY LIBRARY - volume 17, 75 years of chromatography - a historical dialogue, Elsevier 1979, 187–192).

After the collapse of the “iron curtain” in 1989, Rudolf E. Kaiser founded the “International Foundation Environmental Assistance for Russia”. He did it together with his current wife Olga—a scientist from Moscow State University—he married her after the death of his first wife Annemarie. Both worked intensively together with the Russian chemical, petroleum and gas industries in the field of advanced training courses, method development and analytical problem solving. During that cooperation, hundreds of colleagues from Russia visited the Institute of Chromatography in Bad Dürkheim. He founded the well-known international journals “Chromatographia” (1968), “Journal of High Resolution Chromatography and Chromatography Communication” (1978), “Computer Application in the Laboratory” (1983), and he worked as Editor-in-Chief or as an Editorial Board member of these journals. He played the key role in the founding of “Journal of Planar Chromatography” (1988).

He started the following series of Symposia and was their chairman for many years:

- International Symposium on Capillary Chromatography (since 1975, Hindelang, now Riva del Garda, I).
- International Symposium on Planar Chromatography (since 1980, Bad Dürkheim, then Interlaken, CH, and Budapest, HU);
- International Symposium on Chromatography and Spectroscopy in Environmental Analysis (since 1994, St. Petersburg, RUS).

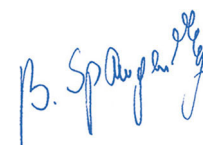
His achievements in chromatography have been recognized by a number of awards:

- Tswett Medal of the USSR Academy of Science, as a first foreign recipient (Moscow, USSR, 1978);

- Gold Medal of the Chinese Academy of Science and Chinese Chemical Society (Beijing, PRC, 1988);
- A.J.P. Martin Award (Brighton, UK, 1989); Marcel Golay Award (Riva del Garda, Italy, 1989);
- Tswett Medal of the Chromatographic Society of Russia (Düsseldorf, 1995);
- 1st Class German Distinguished Medal for his contribution to environmental analysis and for his international activities in this field (Berlin, 1996);
- Clemens Winkler Medal of the Gesellschaft Deutscher Chemiker (GDCh) (Munich, 2010).

In our days of globalization, he actively uses the Internet to disseminate knowledge worldwide and to communicate between colleagues. He scolds “Windows 10” and therefore uses “Linux”. He actively adds data to his web links (Interchrom-Forum, Planar Chromatography by Kaiser, Institute for Chromatography) and is of course still interested in current research.

Rudolf E. Kaiser likes to use the sentence “Chromatography separates substances, but unites people” (which similarly stands as the inscription on the grave of Mikhail Tsvet in Voronezh, RUS). In Corona times, unfortunately, only the first part applies. All conferences to celebrate this active, warm-hearted, enthusiastic, inspiring, creative and original sponsor of chromatography must be postponed to 2021.



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(Editor-in-Chief)

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